Using Experiential Learning Theory to Design a Reflective Online Learning Environment (ROLE)

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ABSTRACT

Today, the methods of delivering knowledge online have become diverse, and online learning environments have reached maturity as evidenced by the fact that most institutions of higher learning are either using them or considering making them one of the leading modes of teaching and learning. Learners today are becoming open-minded due to the technology that provides communication channels with different features and functionality. This study aims to observe the level of interaction between the facilitator-student and student-student in the Reflective Online Learning Environment (ROLE) and the progress of the learner's reflection and the facilitator's feedback. Based on a case study and literature review, this study seeks to determine the components of Experiential Learning Theory to be visualized into the learning process to create an effective instructional strategy for effective lesson design. The study reveals that the reflective activity plays a vital role in the transformation of grasp experience to the new experiences.

***Keywords**: Experiential Learning, Reflective Online Learning Environment, Lesson design*

Introduction

This section introduces experiential learning theory (ELT) in context of its application in the postgraduate program specifically in Masters of Instructional Design and Technology (MIDT) at Open University Malaysia. MIDT is a fully online course that has a course structure that enables the learners to share and build their knowledge based on their experiences. The scope of the definition of ELT is confined to the method of course delivery, wherein most activities; the learners are asked to reflect on the prior knowledge then construct it and turn into new knowledge.

The Apple Inc. Dictionary (2016) defined 'reflect' as "think deeply or carefully about," while the British English Thesaurus gives meanings of reflecting as "think about, give thought to". In reference to the meaning, reflection seems to be very closely linked with cognitive processes as supported by Demetriou & Wilson (2008) that stated "reflection is a cognitive process that helps teachers to gain insights into the 'big picture' and rethink their practice, learn from their experiences and help them to cope with similar situations in the future".

Reflection in online learning is considered vital in the learning process as it involves the process of digesting information, especially in determining discrepancies and problems of understanding of certain concepts that can occur in the learner's experience.

Issues and challenges

All OUM learners are working adults. The main challenge for the working adult as learners is their readiness to undergo the learning process. The lesson is designed around task-based instructions. The task, which is a part of the whole activity, aims to create a high interactivity and collaborative discussion amongst learner-learner and learner-facilitator. The activity is combined with online quizzes as part of its formative assessment.

Another challenge for adult learners is maintaining focus during the learning process, most notably because their minds are also preoccupied with other commitments in their daily life such as work and family. These factors can affect their learning engagement. The lessons need to be designed in a manner that can assist the learners in their learning process.

Kaur, Fadzil, and Abas (2010 p.6) indicated that "online engagement to a degree has to be engineered. That is, it needs to be part of an intended design. For example, you cannot expect students to engage in meaningful discussion on a particular topic if each is at different stages of the learning program. Also, group work and ongoing dialogue are best maintained if there is a common goal or purpose". Keeping the online learners engaged during most of the activities, as laid out in myINSPIRE, can be a great challenge due to lack of focus in performing the tasks. The tutors have to play their roles in assisting learning to happen.

In an online course students can choose the extent, date, and nature of the interaction with other participants. Online course interaction is personal; allowing an intimacy between the students and lecturers and among the students, and students saw it as one of the strengths of the course. (Shonfeld and Ronen ,2015 p.24)

Online interaction in online learning is considered crucial and vital, for the learners to attain a meaningful learning session. Zoraini Wati Abas & Mansor Fadzil (2008) reported in their study, suggests that the minimum percentage of faculty interaction in online classes should

vary between 10% to 25% for students to achieve an effective learning session. At Open University Malaysia, a 30% online discussion interaction is the norm.

The Study

The purpose of this study was to observe:
1. The level of interaction between the facilitator-student and student-student in ROLE
2. The progress of the learner's reflection and the facilitator's feedback.

LITERATURE REVIEW

Experiential Learning

Schaller (2018 p. 102) in his study on a field learning project of an undergraduate consumer behavior class on student perceptions of the learning experience and related learning outcomes concluded as *overall, students who participated in the field learning activity reported positive perceptions of the experience and their learning outcomes*.

Ally (2008:30) stated that learning should be an active process. Keeping learners active doing meaningful activities results in high-level processing, which facilitates the creation of personalized meaning. The resources that support the learning should be very close to the students so that they will be able to align the information to the outcomes. The richness of the learning process relies on the choices given to the learners in selecting the best way for them to learn. The scenario shows that the importance of the learner's experience in making the learning successful. In Experiential Learning Theory (ELT), Kolb, A.Y and Kolb, D.A.(2017 p. 31) it was highlighted that grasping experience refers to the process of taking in information and transforming experience is how individuals interpret and act on that information.

Operationalizing ELT

In operationalizing ELT, one of the most important factors is to determine the components of ELT provided by Kolb and Kolb (2017) and the practical side of ELT by Beard and Wilson (2013). In common usage, the terms of ELT by Kolb, A.Y and Kolb, D.A (2017 p.5) who defined ELT as a particular form of learning from life experience is used as part of the ideas that formulated and synthesized then contextualized into the instructional setting in OUM.
In ELT, experience seems to be essential in the whole learning cycle as in Figure 1 The learning cycle starts with the concrete experience.

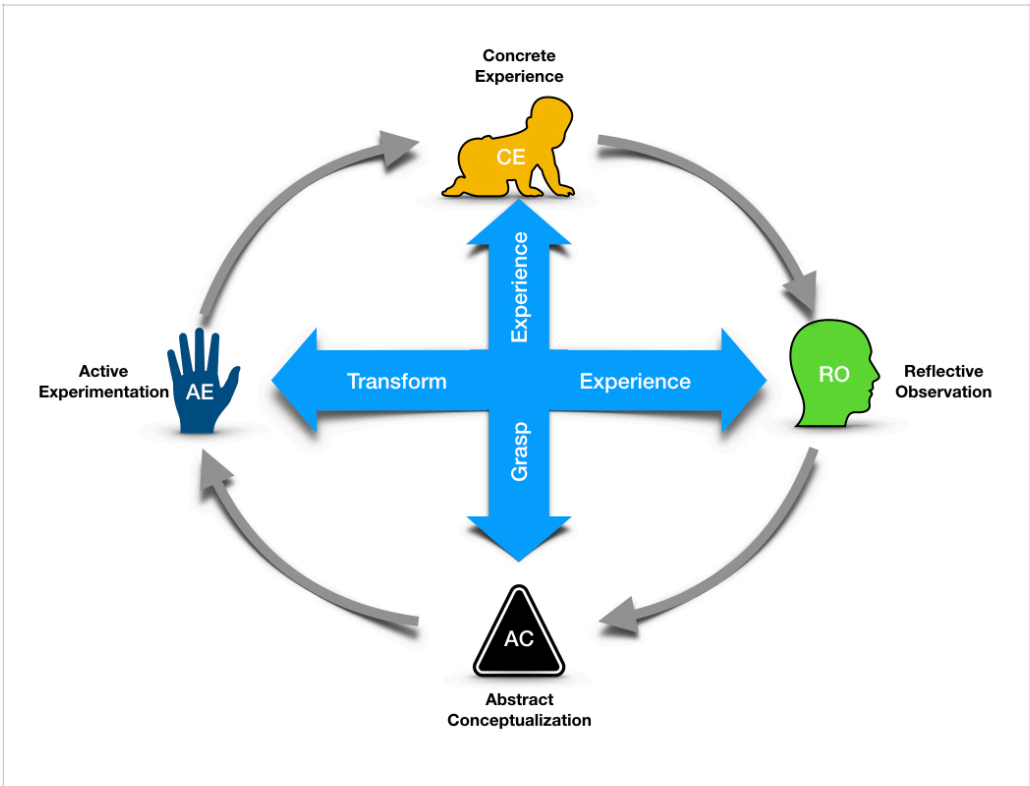

Figure 1:. Experiential Learning Cycle (Kolb and Kolb, 2017 p.32)

Note: Enhanced diagram based From "Figure 2.1 "Experiential Learning Cycle," by Kolb, A.Y & Kolb, D.A. The Experiential Educator, 2017, p. 8

ELT depicted two related modes of gaining experience; Concrete Experience (CE) and Abstract Conceptualization (AC), the two modes then transform the experience to Reflective Observation (RO) and Active Experimentation (AE). David (2007) simplified the transaction between two modes as four stages as; CE (as DO), RO (as OBSERVE), AC (as THINK) and AE (as PLAN)

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As a whole the implementation of ELT in the learning process involves two main components called as 'experience' as shown in Figure 2. Thus, the ideas of ELT emphasize experience. The overall learning cycle describes learning cycle as recursive circle (Kolb and Kolb, 2017 p. 33). Its means there is an iterative process from the 'grasp experience' phase to 'transform experience' phase in the learning cycle from Stage 1 to 4.

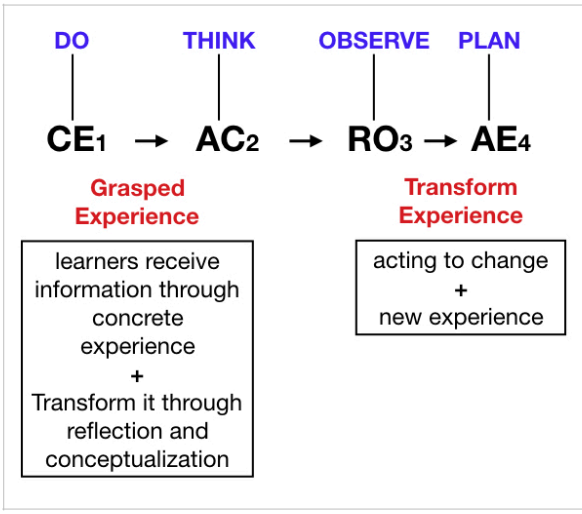

Figure: 2 Visualization of Four Stages of Learning Cycle in ELT
Note: Conceptualization of ROLE (synthesize from Kolb & Kolb, 2017; David, 2007)

Figure 3 shows the visualization of learning process in ELT learning cycle. As a whole, the learning happen in two stages; 1) Grasp Experience and 2) Transform Experience. The learners receive the information through their concrete experience (CE) and transform it through conceptualization (Abstract Conceptualization (AC)) and reflection (Reflective Observation (RO)) and then transform through Active Experimentation (AE) to create a new experience.

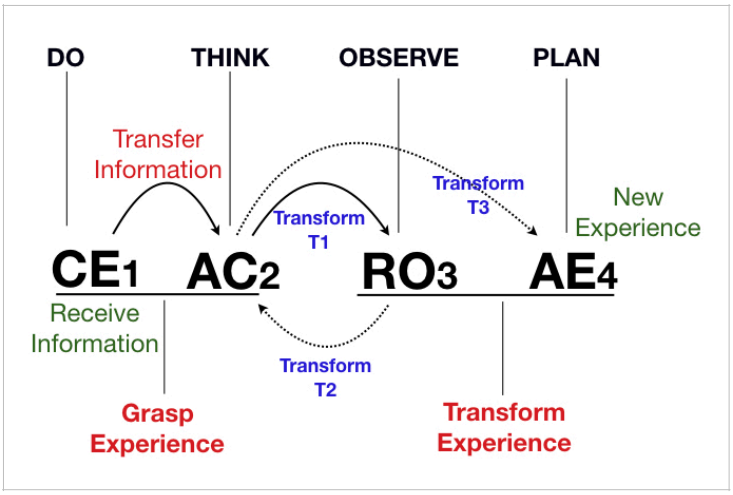

Figure: 3 Visualization of Learning Processes in ELT learning cycle
Note: Visualization of Learning Processes in ELT learning cycle (Synthesize from Kolb & Kolb, 2017; David, 2007)

The learning process should involve active participation from both the learners and tutor. The learners should be more attentive in performing the task given by the tutor. Active participation means the learning process should incorporate active interaction with the learning experiences for the learners to reflect. The result of the active participation should be in 'high-level processing.'

Methodology

In context of this study, the initial process only involved the plan, design and development of the prototype. usabilty.gov (n.d) defined *prototype is a draft version of a product that allows you to explore your ideas and show the intention behind a feature or the overall design concept to users before investing time and money into development.* In order to collect meaning-

ful data, low-fidelity prototypes are used where output of the interface are used to simulate the task.

The strategy as designed in Figure 2 and 3 is then used in teaching and learning in the fully online course, a post graduate program Master of Instructional Design and Technology (MIDT). Five students involved in the study who are required to follow the structure of the contents that is laid out based on the content structure in Figure 8. The learning process is conducted to reflect the do, think, observe and plan stages. The learning process is structured in a self-paced manner where the learning process lasts until the end of the semester, but the activities control the learning sequence.

After an initial try-out, the insight gained from the initial data will be used as an indicator to further the study and to deepen the knowledge and then to design a more efficient learning environment, so that it can benefit the facilitators and the learners in the long run. The interactions between the learners-learners and facilitator-learners would then be analyzed by studying numbers of interaction nodes. The learning analytics from the LMS is used to analyze the numbers of interaction modes.

The graduates are required to follow the structure of the contents that is laid out based on the content structure in Figure 8. The learning process is conducted to reflect the do, think, observe and planning stages. The learners are allowed to undergo their learning process at their own pace within ten (10) weeks of interaction in the LMS. The learning process is structured in a self-paced manner where the learning process lasts until the end of the semester, but the activities control the learning sequence. The report (learning analytic) is gathered at the end of the semester and analyzed according to the stages below:

Stage 1: Concrete Experience (CE)
The learners need to do the readings activity, based on their understanding on the readings, in the grasp experience phase, the learners need to discuss the outcomes in the online forum (Task 1) (CE).

Stage 2: Abstract Conceptualizatio (AC)
After the discussion, the learners are required to write a reflective paper (Task 2) (AC) to reflect on the ideas discussed in the online forum. After undergoing the CE and AC in grasp experience, the learners then proceed to the transform experience phase that involves the reflective observation (RO) and active experimentation (AC).

Stage 3: Reflective Observation (RO)
In this phase, the learners are required to identify specific problems based on their reflective paper. The information synthesized from the reflective paper is discussed in the online forum (Task 3).

Stage 4: Active Experimentation (AE)
Based on an online forum in Task 3, the learners are required to plan and develop the instructional system.

The content that is planned through skill hierarchy technique is to determine the entry level and the learning path. On the whole, the content is organized in five levels to achieve two terminal objectives (TO). Each level of the content has dedicated enabling objectives (EO). Figure 4 shows the visualization of the organization of content according to the level of skill and knowledge (S/K). The core and the lowest skill and knowledge (S/K) in Level 1 are considered as the foundation before proceeding to the next level. Just imagine, how we are going to deliver the six S/K, efficiently in a short time? If we simulate it into the ELT learning process, it looks like as shown in Figure 5.

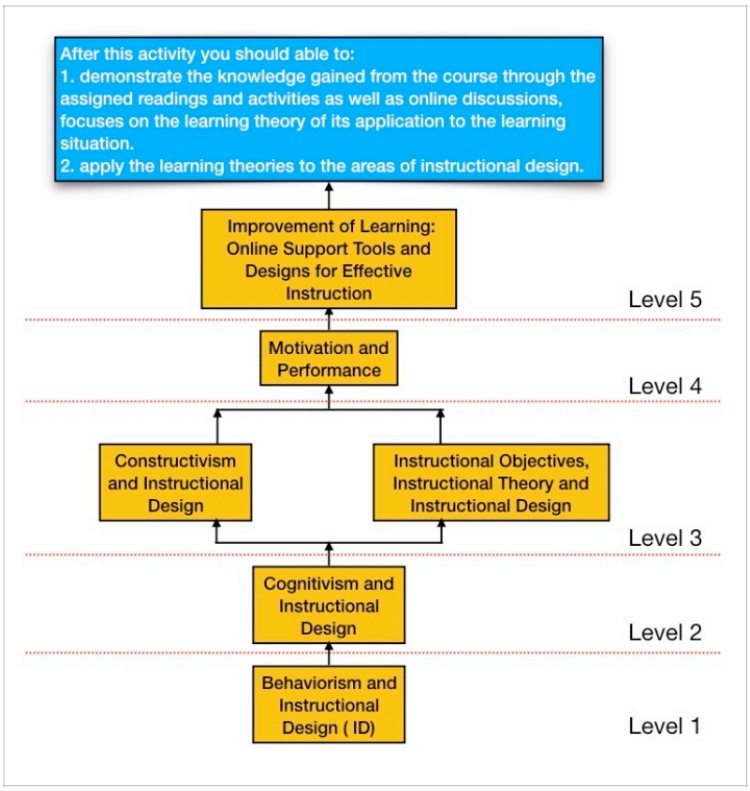

Figure 4: Activity Structure

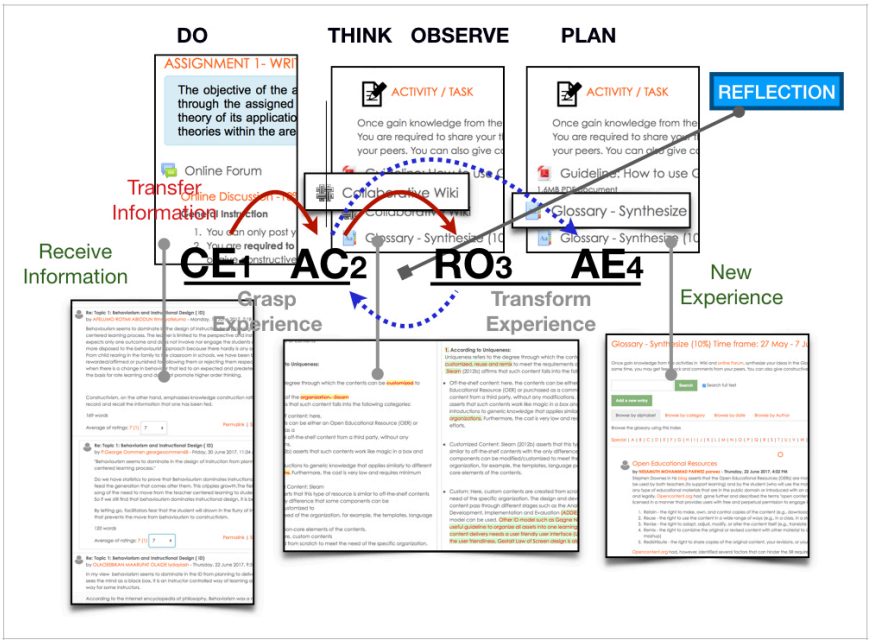

Figure 5: Content Structure and ROLE

Findings

The level of interaction between the facilitator-student and student-student in ROLE

Since the design of ROLE is still at the initial stage, not much data is gained from the system. However, some preliminary data is used to observe the effects of the learning process. After undergoing the learning process for 10 weeks, some of the related data are collected to observe the consequences of the reflection area. Collaborative Wiki and Online Forum is used

as an activity to achieve the enabling objectives from level 1 to level 2 of the learning hierarchy.

The first activity on the online forum provides the learners with relevant information. The information is gathered through online discussions where the students are free to post any information according to the topics determined by the facilitator. This scenario is reflected in Figure 6. This activity is done before they synthesize it in the Collaborative Wiki. Figure 6 shows a posting in the online forum between the facilitator and four learners. The posting indicates that there is a tendency of posting quality information and the information posted is improved or added by the peers. The information flow shows that there is a dynamic interaction among peers. The facilitator triggers the discussion by initiating the fundamental question, student 1 (S1) react and post, Student 2 (S2) then replied on Student 1, student 3 (S3) responded to student 1 (S1) and the facilitator (F).

The posting keeps on e panding after student 4 (S4), and student 5 (S5) replied to student 3. The initial findings show that there is a reciprocal interaction between the facilitator-student and student-student.

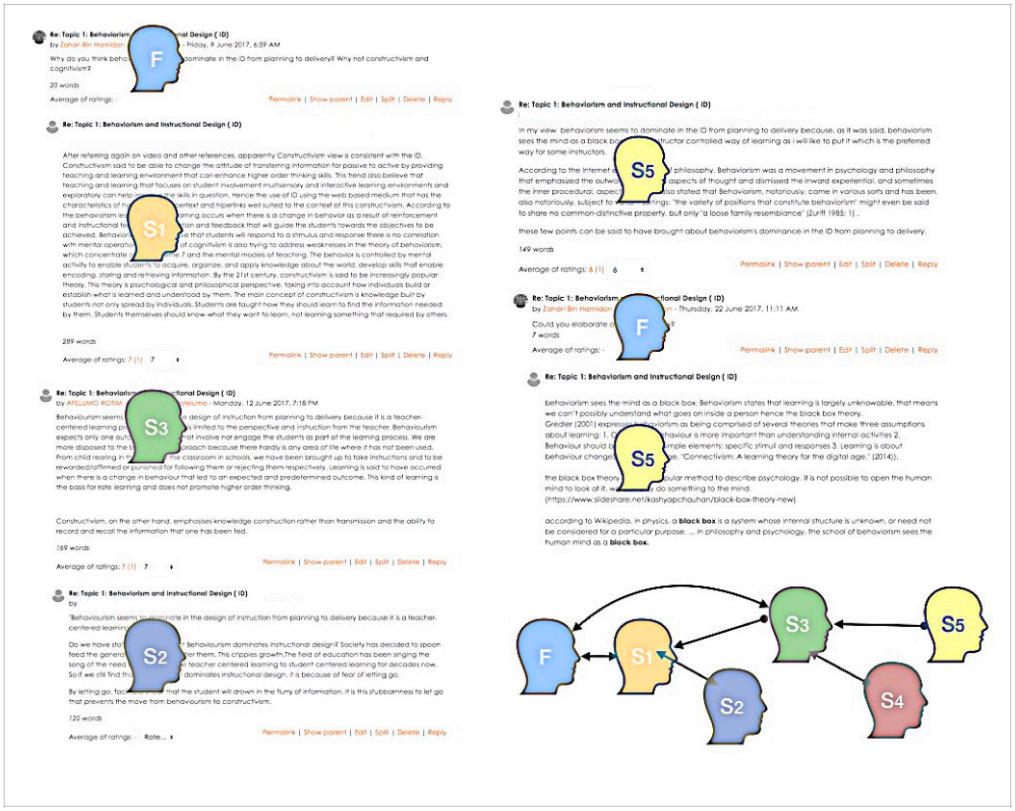

Figure 6: Posting in the online forum between the facilitator and four learners

The progress of the learner's reflection and the facilitator's feedback.

Figure 7 shows the data of history in Collaborative Wiki between the Facilitator and the learner. The data shows a difference in input between the learners and the facilitators according to the version. The version demonstrate the progress of the learner's reflection and the facilitator's feedback. The history shows that the students reflect within an average of two minutes from 6.32 - 6.51 pm in one day.

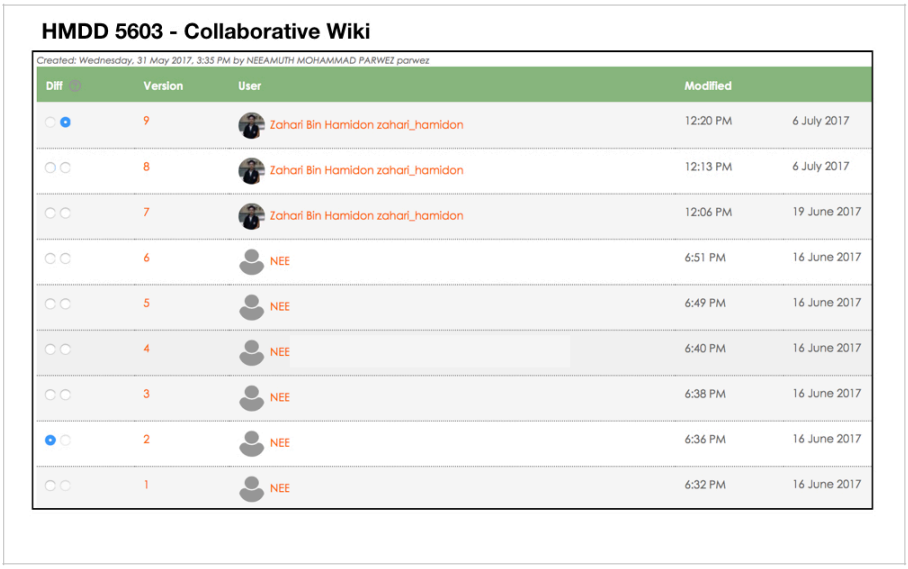

Figure 7: Data of history in Collaborative Wiki between the Facilitator and the learner.

Figure 10 shows the learner's input and the facilitator's feedback in Collaborative Wiki. The input and feedback shows that there is a tendency to create a high engaging learning experience to the learners provided there is a guide from the facilitator.

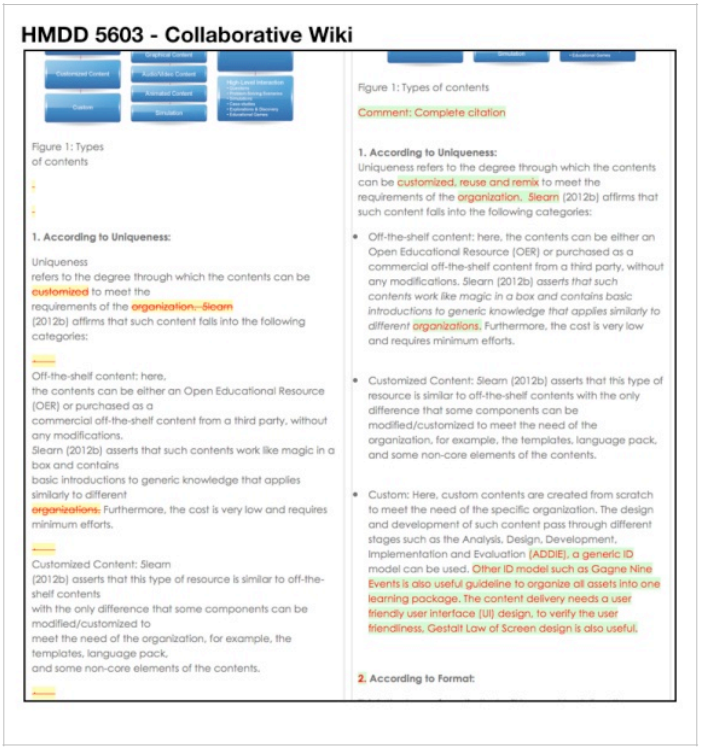

Figure 10: Learner's input and the facilitator's feedback in Collaborative Wiki

CONCLUSION

This study is still in the early stages of the design and development of the Reflective Online Learning Environment (ROLE). In operationalizing the concept, the indicators and criteria are clearly reflected in the framework, and for the operation at the micro level, the components in the learning architecture is considered significant.

This study, on the whole, reveal some result of the learner's experience. The grasp experience that is a learner's background is used to strengthen the learning process through reflec-

tive activities in the forum and collaborative wiki. Reflective activity plays an important role to transform the grasp experience to the new learning experiences.

This study is focused on the application of ELT into the lesson design in ROLE. The data provided are just preliminary information that are used as indicators to improve the structure of the activity in ROLE. More studies needs to be conducted especially for usability testing, cognitive load, and user's experience. The conceptualization of ELT by Kolb and Kolb (2017) require more debate and critically analyzed to build a good case study. More works need to be done especially on debating on the framework and the learning architecture, as it will prominently affect the design and development of ROLE.

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